

### ABSTRACT

A system, components and methods provide FEC decoding in a wireless communication system in which signal to noise ratio estimation is used for scaling information captured by a demodulator in processing received wireless communication signals. A preferred wireless transmit receive unit (WTRU) has a channel rate estimation device configured to process the received communication signals for the particular communication channel and to produce channel change rate estimates. A signal to noise ratio (SNR) estimation device of the WTRU is configured to produce SNR estimates based on observation windows of a calculated number of samples of the received signal where the number of samples used for each observation window is calculated a function of the channel change rate estimates produce by the channel rate estimation device.